AMENDMENTS TO THE CLAIMS

1. (Currently amended) A method of ~~identifying~~ screening for a genetic mutation that is associated with adult onset cerebellar ataxia in a human subject, said method comprising:

(a) determining a first nucleic acid sequence of a human protein kinase C gamma gene from a first human subject exhibiting adult onset cerebellar ataxia;

(b) comparing the first nucleic acid sequence to SEQ ID NO:3 to identify a difference between the first nucleic acid sequence from the first human subject exhibiting adult onset cerebellar ataxia and SEQ ID NO:3, wherein the difference alters the amino acid sequence encoded by the human protein kinase C gamma gene; and

(c) ~~confirming that~~ performing co-segregation analysis to determine whether the difference identified between the first nucleic acid sequence and SEQ ID NO:3 is a genetic mutation associated with adult onset cerebellar ataxia ~~by co-segregation analysis~~.

2. (Previously presented) The method of Claim 1 wherein the first nucleic acid sequence from said first human subject is determined by amplification of at least a portion of the human protein kinase C gamma gene from genomic DNA isolated from said human subject to produce an amplified DNA and sequencing said amplified DNA.

3. (Canceled)

4. (Previously presented) The method of Claim 1 wherein said co-segregation analysis comprises a method selected from the group consisting of direct sequencing, sequencing PCR-amplified DNA, single stranded conformation analysis, allele-specific PCR and restriction fragment length polymorphism analysis.

LAW OFFICES OF
CHRISTENSEN O'CONNOR JOHNSON KINDNESS PLLC
1420 Fifth Avenue
Suite 2800
Seattle, Washington 98101
206.682.8100

5. (Previously presented) The method of Claim 4 wherein said co-segregation analysis comprises sequencing PCR-amplified DNA.

6. (Previously presented) The method of Claim 4 wherein said co-segregation analysis comprises restriction fragment length polymorphism analysis.

7-42. (Canceled)

43. (Previously presented) The method of Claim 1, wherein the first nucleic acid sequence is a coding region of the human protein kinase C gamma gene selected from the group consisting of exon 1; exon 2; exon 3; exon 4; exon 5; exon 6; exon 7; exon 8; exon 9; exon 10; exon 11; exon 12; exon 13; exon 14; exon 15; exon 16; exon 17; and exon 18.

44. (Previously presented) The method of Claim 1, wherein the first nucleic acid sequence comprises exon 4 of the human protein kinase C gamma gene.

45. (Previously presented) The method of Claim 1, wherein the mutation associated with adult onset cerebellar ataxia is selected from the group consisting of a missense mutation, a deletion mutation, and an insertion mutation.

46. (Previously presented) The method of Claim 45, wherein the mutation is a missense mutation.

LAW OFFICES OF
CHRISTENSEN O'CONNOR JOHNSON KINDNESS PLLC
1420 Fifth Avenue
Suite 2800
Seattle, Washington 98101
206.682.8100